

## **REMARKS**

Prior to this Reply, Claims 1-42 were pending. Through this Reply, Claims 2, 5, 12-15, 17, 19, 28, 30-32 and 36-37 have been cancelled without prejudice to, or disclaimer of, the subject matter claimed therein. Furthermore, Claims 1, 16, 27, 33 and 38 have been amended, while Claims 43-50 have been added. Accordingly, Claims 1, 3, 4, 6-11, 16, 18, 20-27, 29, 33-35 and 38-50 are now at issue in the present case.

### **I. Objected-To Claims 37 and 38**

The Examiner objected to Claims 37 and 38 as not particularly pointing out and distinctly claiming the invention since such claims refer to “the operation amplifiers” and “the multiplexed voltages” which were not previously set forth. The Examiner noted that it appears that Claim 37 should depend from Claim 36 and Claim 38 should depend from Claim 37.

In response, Applicant has cancelled Claim 37. Accordingly, Applicant believes that the objection to Claim 37 is now moot.

Furthermore, Claim 38 has been amended so that it depends from Claim 33. Applicant believes that Claim 33 (as amended) provides proper antecedent basis for amended Claim 38. Accordingly, Applicant believes that the objection to Claim 38 has been overcome.

### **II. Allowable Subject Matter**

The Examiner objected to Claims 2, 12-15, 30-32 and 37-41 as being dependent upon a rejected base claim. However, the Examiner indicated that such claims would be allowable if rewritten in independent form to include all of the limitations of their respective base claims and any intervening claims.

In response, Applicant has amended Claim 1 to include the limitations of objected-to Claim 2. Accordingly, Claim 2 has been cancelled.

New Claims 44-47 correspond with objected-to Claims 12-15. Accordingly, Claims 12-15 have been cancelled.

New Claims 48-50 correspond with objected-to Claims 30-32. Accordingly, Claims 30-32 have been cancelled.

Claim 33 has been amended to substantially include the limitations of Claim 36 and objected-to Claim 37. Accordingly, Claims 36 and 37 have been cancelled.

### **III. Rejection of Claims 33-36 Under 35 U.S.C. § 102(b)**

The Examiner rejected Claims 33-36 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,654,840 to Patton et al. (hereinafter “Patton”). As mentioned above, Claim 33 has been amended, among other things, to include the limitations of objected-to Claim 37. Accordingly, Applicant submits that Claim 33 and the claims that depend therefrom are patentably distinguishable from Patton.

### **IV. Rejection of Claims 1, 16-29 and 33-35 Under 35 U.S.C. § 102(e)**

The Examiner rejected Claims 1, 16-29 and 33-35 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,643,088 to Kawachi (hereinafter “Kawachi”).

As noted above, Applicant has amended Claim 1 to include the limitations of objected-to Claim 2. Accordingly, Applicant submits that Claim 1 and the claims that depend therefrom are patentably distinguishable from Kawachi.

With respect to Claim 16, Applicant has amended such claim to include the limitations of Claims 17 and 19. Accordingly, Claims 17 and 19 have been cancelled.

Kawachi does not disclose a method of controlling a transducer head velocity during a ramp load/unload by: “setting a target velocity; measuring the voltages across a voice coil motor ("VCM") and a sense resistor in series with it; calculating a back EMF voltage using the measured voltages across the VCM and the sense resistor; calculating a velocity error using the target velocity by calculating the velocity of the transducer head in discrete-time using the measured back emf voltage and comparing the velocity of the transducer head and the target velocity; and adjusting the transducer head velocity using the velocity error,” as required by amended Claim 16.

In contrast to the Examiner’s assertions, Applicant respectfully submits that Figs. 6-7 of Kawachi do not disclose the claimed limitation of calculating the velocity of the transducer head in discrete-time. Figs. 6-7 of Kawachi simply refer to various stages of unloading a head (Col. 9, line 54 to Col.10, line 44) without mention of discrete-time calculations of head velocity. Further, no sampling or sampling periods are disclosed in Kawachi.

Accordingly, for at least the above reasons, Applicant submits that Claim 16 is patentably distinguishable from Kawachi. Furthermore, for at least the same reasons, Applicant submits that all claims that depend from Claim 16 are also patentably distinguishable from Kawachi.

With respect to Claims 27, Applicant has amended such claim to include the limitation of Claim 28. Accordingly, Claim 28 has been cancelled.

Kawachi does not disclose a method of measuring a transducer head velocity during a ramp load/unload by: “measuring the voltages across a voice coil motor ("VCM") and a sense resistor in series with the VCM; calculating the back EMF voltage using the measured voltages

across the VCM and the sense resistor; and calculating the velocity error using the back EMF voltage wherein the velocity of the transducer head is calculated in discrete-time,” as required by amended Claim 27.

As discussed above, Figs. 6-7 of Kawachi do not disclose the claimed limitation of calculating the velocity of the transducer head in discrete-time. Figs. 6-7 of Kawachi simply refer to various stages of unloading a head (Col. 9, line 54 to Col.10, line 44) without mention of discrete-time calculations of head velocity. Further, no sampling or sampling periods are disclosed in Kawachi.

Accordingly, for at least the above reasons, Applicant submits that Claim 27 is patentably distinguishable from Kawachi. Furthermore, for at least the same reasons, Applicant submits that Claim 29, which depends from Claim 27, is also patentably distinguishable from Kawachi.

**V. Rejection of Claims 3-11 and 42 Under 35 U.S.C. § 103(a)**

The Examiner rejected Claims 3-11 and 42 under 35 U.S.C. § 103(a) as being unpatentable over Kawachi in view of Applicant’s admitted prior art as discussed in the background of the invention (hereinafter “AAPA”).

As mentioned above, Claim 1 has been amended to include the limitations of objected-to Claim 2. Claims 3-11 depend from Claim 1. Accordingly, Claims 3-11 are patentably distinguishable from Kawachi and AAPA, at least, because such claims depend from Claim 1.

Furthermore, as also mentioned above, Claim 33 has been amended, among other things, to include the limitations of objected-to Claim 37. Claim 42 depends from Claim 33.

Accordingly, Claim 42 is patentably distinguishable from Kawachi and AAPA, at least, because Claim 42 depends from Claim 33.

## **VI. New Claim 43**

New Claim 43 requires a method of controlling a transducer head velocity during a ramp load/unload by: "measuring the voltages across a Voice Coil Motor ("VCM") and a sense resistor positioned in series with the VCM; selecting between a PWM technique and an IR cancellation technique, using a microprocessor, to calculate the back emf voltage using the measured VCM and sense resistor voltages; and adjusting the velocity of the transducer head using the calculated back emf voltage." Applicant believes that Claim 43 is patentably distinguishable from the cited references.

## **VII. Additional Claim Fees**

In determining whether additional claim fees are due, reference is made to the Fee Calculation Table (below).

**Fee Calculation Table**

	Claims Remaining After Amendment		Highest Number Previously Paid For	Present Extra	Rate	Additional Fee
Total (37 CFR 1.16(c))	36	Minus	42	= 0	x \$18 =	\$ 0.00
Independent (37 CFR 1.16(b))	7	Minus	4	= 3	x \$86 =	\$ 258.00

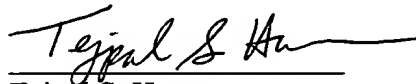
As set forth in the Fee Calculation Table (above), Applicant previously paid claim fees for forty-two (42) total claims and for four (4) independent claims. Therefore, Applicant hereby authorizes the Commissioner to charge Deposit Account No. 50-2198 in the amount of \$258.00 for the presentation of three (3) independent claims over four (4). Although Applicant believes that no other fees are due, the Commissioner is hereby authorized to charge Deposit Account No. 50-2198 for any fee deficiencies associated with filing this paper.

**VIII. Conclusion**

Applicant believes that the application appears to be in form for allowance. Accordingly, reconsideration and allowance thereof is respectfully requested.

The Examiner is invited to contact the undersigned at the below-listed telephone number regarding any matters relating to the present application.

Respectfully submitted,



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